DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

1. TITLE	2. IDENTIFICATION NUMBER
ELECTROMAGNETIC INTERFERENCE CONTROL PROCEDURES (EMICP)	DI-EMCS-80199A

3. DESCRIPTION / PURPOSE

3.1 This EMICP provides data to evaluate the contractor's design procedures and techniques used to meet equipment or subsystem contracted electromagnetic interference (EMI) control requirements based on MIL-STD-461.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
930111	EC		

7. APPLICATION / INTERRELATIONSHIP

7.1 This Data Item Description (DID) contains the format and content preparation instructions for the EMICP required by 5.1 of MIL-STD-461.

7.2 This DID is applicable when an electronic, electrical, or electromechanical equipment or subsystem is required to meet contractual EMI requirements based on MIL-STD-461.

7.3 This DID supersedes DI-EMCS-80199.

9. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
		N6853

10. PREPARATION INSTRUCTIONS

10.1 Reference documents. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as specified in the contract.

10.2 Format. The EMICP format shall be contractor selected. Unless effective presentation would be degraded, the initially used format arrangement shall be used for all subsequent submissions.

10.3 Content. The EMICP shall contain the following:

10.3.1 Management. The EMICP shall define the specific organizational responsibilities, lines of authority and control, and the implementation planning, including milestones and schedules. In addition, the detailed EMI requirements to be imposed on subcontractors and a definition of responsibility for associated contractor equipment, Government Furnished Equipment, and subcontractor vendor items shall be indicated. A description of the equipment or subsystem, its characteristics, where known, and intended installation or platform shall also be indicated. Plans and procedures for

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11. DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

Block 10, Preparation Instructions (Continued)

identifying and resolving potential EMI problems shall be discussed. Also, the methods for testing and implementing solutions shall be discussed. A point of contact for EMI technical issues shall be identified.

10.3.2 Design techniques and procedures. The EMICP shall describe the specific design techniques and procedures that shall be employed to meet each contractual emission and susceptibility requirement. This shall include the following:

a. Spectrum management techniques.
b. EMI mechanical design, including materials and construction techniques, as follows:

    (1) Type of metals, casting, finishes, and hardware employed in the design.
    (2) Type of construction, such as: compartmentizing; filter mounting and isolation of other parts; type and characteristics of filtering used on openings, including ventilation ports, access hatches, windows, metal faces and control shafts; and type of attenuation characteristics of Radio Frequency (RF) gaskets used on all internal and external mating surfaces.
    (3) Shielding and design practices employed for determining shielding effectiveness.
    (4) Corrosion control procedures.
    (5) Methods of bonding at Equipment Under Test (EUT) overlapping surfaces (e.g., surface preparation and gasketing).

c. Electrical and electronic wiring design, including cable types or characteristics, cable routing, cable separation and grounding philosophy. If cable shielding is employed, describe shield type(s) and termination method(s).
d. Electrical and electronic circuit design, including the following:

    (1) Justification of selected filter characteristics, including type, attenuation, technical reasons for selecting types of filters, and line-to-ground capacitance values of AC and DC power line filters.
    (2) Part location and separation for reducing EMI.
    (3) Location, shielding, and isolation of critical circuits.

10.3.3 Analysis. Analysis results shall be provided to demonstrate how each applicable requirement is going to be met.

10.3.4 Developmental testing. The EMICP shall include a discussion of each test to be performed during development (i.e., breadboard, prototype, and engineering model levels).